REMARKS

In the Action, claims 1-13 were allowed as filed and that allowance is noted. In addition, claims 14-16 were rejected under 35 USC §103(a) as being unpatentable over Gellert (EP 0609676) in view of Fujioka et al (DE 4402818).

By this Amendment, independent claim 14 has been rewritten as new independent claim 17, and the dependency of claims 15 and 16 has been amended accordingly. It is submitted that the subject matter of claim 17 is not rendered obvious by the Gellert or Fujioka et al references, whether taken individually or in any permissible combination.

Claim 17 relates to a unique gas pin device for plastic injection molding operations, the device having a sensor incorporated in it for detecting the presence of plastic material in the mold. As opposed to the cited references, the sensor can be either a thermocouple which senses temperature, or another sensor, such as a fiber optic member which senses movement. Moreover, the sensor is incorporated directly into a central shank portion of the gas pin device, which differs in structure from both the Gellert and Fujioka et al references. In this regard, the thermocouple in Gellert is positioned on the outside of a plastic injection bushing, while the temperature sensor in Fujioka et al appears to be positioned in a channel or passageway outside the mold cavity.

Moreover, as recognized by the Examiner, Gellert does not disclose a gas pin member for injecting gas at all, but instead discloses a plastic injection nozzle (or bushing). The thermocouple in Gellert is positioned in an "insulative air space" and used

to monitor the operating temperature of the nozzle adjacent the injection end. Gellert does not disclose a sensing device positioned in an inner shank member positioned in an outer body member, or a sensing device which is positioned in contact with the plastic material to sense its presence or temperature.

The disclosure and teachings of Fujioka et al is similarly far removed from disclosing or suggesting the present invention. In this regard, USP 5,635,117 appears to be the corresponding U.S. counterpart to the DE 4402818 reference cited by the Examiner. Both the US '117 and DE '818 claim priority from the same Japanese document No. 5-034893 (filed on J anuary 30, 1993), and both contain the same drawings. The Abstract of the US '117 patent is helpful and discloses that the temperature sensor used in the DE '818 reference is not utilized to detect the temperature or presence of plastic in the mold, but instead is used to sense when a nozzle is clogged and needs to be cleaned. Also, the temperature sensor is not included in an inner shank member positioned in an outer member, but instead is positioned in a gas injection passageway.

Finally, neither of the two cited references disclose the use of a fiber optic member as the sensor in the gas pin device, as set forth in dependent claim 16.

Thus, it is clear that the Applicant's gas pin invention as set forth in independent claim 17, as well as in dependent claims 15 and 16, differs significantly in structure and operation from the cited references and is not rendered obvious and unpatentable over

any combination of them. There also is no suggestion, teaching or motivation in the two references which would lead persons of ordinary skill in the art to conceive or develop the Applicant's invention.

As a result, it is submitted that all of the claims remaining in the case, namely claims 1-13 and 15-17, are in proper form and patentably distinguish from the prior art. Thus, allowance of the claims and passage of the application to issuance are respectfully solicited.

The Commissioner is authorized to charge any fees due to Deposit Account No. 50-0476.

Respectfully submitted,

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